

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-11 (Canceled).

Claim 12 (Currently Amended): A stride monitoring device, comprising:

a first shoe including at least a magnetic mass;

a second shoe including at least one magnetometer for measuring a magnetic field produced by the magnetic mass in the first shoe and for outputting magnetic field signals based on the measured magnetic field produced by the magnetic mass in the first shoe, wherein said magnetic field signals can be processed to determine stride parameters, and

wherein ~~at least one of said first or second shoes~~ shoe further comprises at least one accelerometer for measuring an acceleration and for outputting acceleration signals based on the measured acceleration,

wherein the acceleration signals outputted by said accelerometer enable determining instants of impact of said second shoe, and wherein the instants of impact are taken into account for calibrating in time a dynamic measurement of a distance between shoes.

Claim 13 (Original): A device according to claim 12, wherein each of the first and second shoes includes at least one magnetic mass, measurement means for making at least one physical measurement, and electronic means for processing the physical measurement, the measurement means including at least one accelerometer and at least one magnetometer capable of outputting signals that can be processed to determine the stride parameters.

Claim 14 (Original): A device according to claim 12, wherein the magnetic mass includes at least one permanent magnet.

Claim 15 (Previously Presented): A device according to claim 12, wherein the second shoe includes a plurality of accelerometers.

Claim 16 (Previously Presented): A device according to claim 12, wherein the second shoe includes a plurality of magnetometers.

Claim 17 (Previously Presented): A device according to claim 12, wherein the second shoe comprises said at least one accelerometer and electronic means for processing said magnetic field signals and said acceleration signals, wherein said electronic means comprises means for transmitting a signal output by the electronic means.

Claim 18 (Original): A device according to claim 17, further comprising portable means for receiving the signal transmitted by the transmission means and for displaying data representative of the signal.

Claim 19 (Original): A device according to claim 18, wherein the portable means comprises:

data reception means;

electronic data processing means for processing data, the electronic data processing means including a memory;

control input means; and

display means.

Claim 20 (Previously Presented): A device according to claim 19, wherein the memory includes:

a sequence to calibrate the signal transmitted by the transmission means, as a function of stride length and magnetic characteristics of the shoes,
a stride length estimating algorithm,
an algorithm to calibrate the signal transmitted by the transmission means as a function of the parameters input by a user, and
an algorithm to estimate the stride speed.

Claim 21 (Original): A device according to claim 20, wherein the calibration sequence is designed to determine a mathematical calibration law by a polynomial regression, and to determine a direct correspondence between the measured signal and the stride length, for given shoes and a given individual.

Claim 22 (Original): A device according to claim 20, wherein the stride length estimating algorithm uses a measurement of a variation in magnetic field resulting from movement of the magnetic mass.

Claim 23 (Previously Presented): A device according to claim 12, wherein said second shoe includes said at least one accelerometer and electronic means for processing said magnetic field signals and said acceleration signals.

Claim 24 (New): A device according to claim 12, further comprising electronic processing means for determining instants of impact of said second shoe based on said acceleration signals outputted by said accelerometer.

Claim 25 (New): A device according to claim 24, further comprising calibration means for performing a calibration in time of the dynamic measurement of the distance between shoes based on the instants of impact.

Claim 26 (New): A device according to claim 25, further comprising means for determining, based on said calibration, instants at which said magnetic field signals are to be processed.

Claim 27 (New): A device according to claim 25, wherein said calibration means perform said calibration based on said acceleration signals output by said accelerometer.

Claim 28 (New): A device according to claim 24, wherein said electronic processing means calculate a time difference between consecutive impact times and calculate a stride based on said time difference.